

CLAIMS

What is claimed is:

1. A transport system for advancing containers, in particular an airport baggage handling system, comprising:
an infeed conveyor defining a transport plane, and an outfeed conveyor disposed at an angle relative to the infeed conveyor; and
a corner transfer unit placed between the infeed and outfeed conveyors for transferring a container from the infeed conveyor to the outfeed conveyor, said corner transfer unit including
a transfer conveyor extending in transport direction of the outfeed conveyor and defined by a transport plane which is lower than the transport plane of the infeed conveyor,
at least one endless primary conveyor belt disposed in an area of the transfer conveyor and having an upper conveyor run moving in the transport direction of the infeed conveyor, said primary conveyor belt being routed about a belt-reversing member and provided over part of its length with a first thickened area for compensating a distance between the transport planes of the infeed conveyor and the transfer conveyor so as to enable a movement of the container from the infeed conveyor onto the transfer conveyor as the container rests on the thickened area, and
at least one movable support element for maintaining the container above the transport plane of the transfer conveyor as the container

leaves the infeed conveyor to thereby lower the container to a level of the transport plane of the transfer conveyor, wherein the thickened area moves downwards via the belt-reversing member in synchronism with a downward movement of the support element.

2. The transport system of claim 1, wherein the transfer conveyor and the primary conveyor belt extend at an angle to one another.
3. The transport system of claim 1, wherein the transfer conveyor and the primary conveyor belt extend at a right angle to one another.
4. The transport system of claim 1, wherein the support element is constructed as an endless secondary conveyor belt with a second thickened area over part of its length for compensating the distance between the transport planes of the transfer conveyor and the primary conveyor belt, said secondary conveyor belt being disposed adjacent to and propelled in synchronism with the primary conveyor belt, wherein the first and second thickened areas have a length, with the length of the first and second thickened areas and the length of the primary and secondary conveyor belts being so sized as to realize a synchronous lowering of the container.
5. The transport system of claim 4, and further comprising a motor for commonly operating the primary and secondary conveyor belts.

6. The transport system of claim 4, wherein the primary and secondary conveyor belts are commonly routed about the belt-reversing member.
7. The transport system of claim 6, wherein the belt-reversing member is a belt-reversing roller.
8. The transport system of claim 1, wherein the transfer conveyor is a belt conveyor with two conveyor belts in spaced-apart relationship.
9. The transport system of claim 1, wherein the corner transfer unit includes a second said primary conveyor belt in spaced-apart relationship to the primary conveyor belt.
10. The transport system of claim 9, wherein the transfer conveyor is a belt conveyor with two conveyor belts in spaced-apart relationship, said two primary conveyor belts are disposed in an area between the two conveyor belts of the transfer conveyor.
11. The transport system of claim 1, wherein the transport direction of the infeed and outfeed conveyors and of the transfer conveyor and the primary conveyor belt are reversible.

12. The transport system of claim 4, wherein the corner transfer unit includes a second said primary conveyor belt in spaced-apart relationship to the primary conveyor belt., said support element including a second said secondary conveyor belt disposed in symmetric relationship to the secondary conveyor belt adjacent to and propelled in synchronism with the second primary conveyor belt.
13. The transport system of claim 4, wherein the length of the primary conveyor belt is twice as long as the length of the secondary conveyor belt.

14. A corner transfer unit for transferring a container between an infeed conveyor and an outfeed conveyor disposed at an angle to one another, comprising:
- a first conveyor in alignment with the outfeed conveyor and having a transport plane which is lower than a transport plane of the infeed conveyor;
 - a second conveyor in alignment with the infeed conveyor and having a transport plane which is lower than the transport plane of the first conveyor, said second conveyor including a thickened area of a size to bridge a vertical distance between the transport plane of the infeed conveyor and the transport plane of the first conveyor and configured to receive an incoming container from the infeed conveyor and deposit it on the first conveyor as the thickened area dives down; and
 - a support element for supporting a trailing zone of the container during transfer of the container from the infeed conveyor to the first conveyor.
15. The corner transfer unit of claim 14, wherein the first conveyor and the second conveyor extend at an angle to one another.
16. The corner transfer unit of claim 14, wherein the first conveyor and the second conveyor extend at a right angle to one another.

17. The corner transfer unit of claim 14, wherein the support element is disposed adjacent to and propelled in synchronism with the second conveyor.
18. The corner transfer unit of claim 14, and further comprising a motor for commonly operating the second conveyor and the support element.
19. The corner transfer unit of claim 14, wherein the support element includes at least one conveyor belt and the second conveyor includes at least one conveyor belt of a length which is twice as long as the length of the conveyor belt of the support element.
20. The corner transfer unit of claim 14 wherein the first conveyor includes two conveyor belts in spaced-apart relationship, said second conveyor including two conveyor belts disposed in an area between the two conveyor belts of the first conveyor.